

Appendix B

Histograms of Differences in Weekly Deposition Velocities Between Two Versions of MLM

The Multi-Layer Model (MLM) was used to simulate hourly deposition velocities of gases and aerosols, which were combined with measured concentrations to estimate dry depositions (fluxes) of pollutants. The version of MLM used for the simulations shown in this report is an updated version of the model used in the Supplement to the 1998 Annual Report (ESE, 2000). The updates include an algorithm that calculates soil resistance continuously, even for periods with missing concentration data, provided that the required meteorological parameters are available. The updates also include improved calculation procedures.

This appendix provides histograms of the difference between deposition velocities and fluxes modeled with the two versions of MLM. Specifically, histograms of the differences between V_d for SO_2 , HNO_3 , O_3 , and particles are given. For example, the histogram of SO_2 V_d differences shows that approximately 20 weekly deposition velocities had a difference of 0.025 cm/sec. 26,506 velocities had a difference of less than or equal to 0.005 cm/sec. Histograms of differences in flux (SO_2 , O_3 , HNO_3 , SO_4^{2-} , and NO_3^-) are also given.

Figure B-1. Histogram of Differences in Weekly SO_2 Deposition Velocity Between the Version 2.0 and Version 2.1 MLM Results

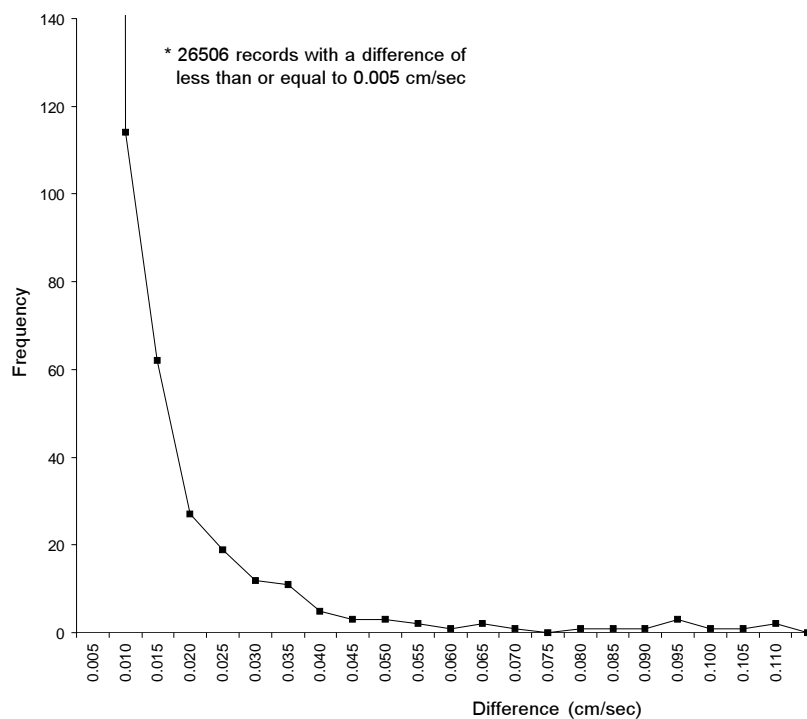


Figure B-2. Histogram of Differences in Weekly HNO_3 Deposition Velocity Between the Version 2.0 and Version 2.1 MLM Results

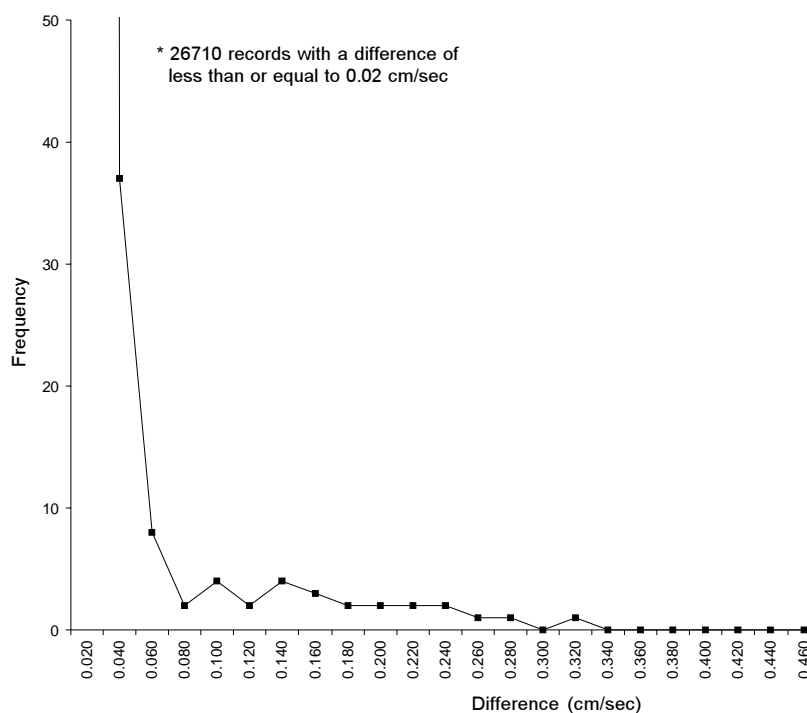


Figure B-3. Histogram of Differences in Weekly Ozone Deposition Velocity Between the Version 2.0 and Version 2.1 MLM Results

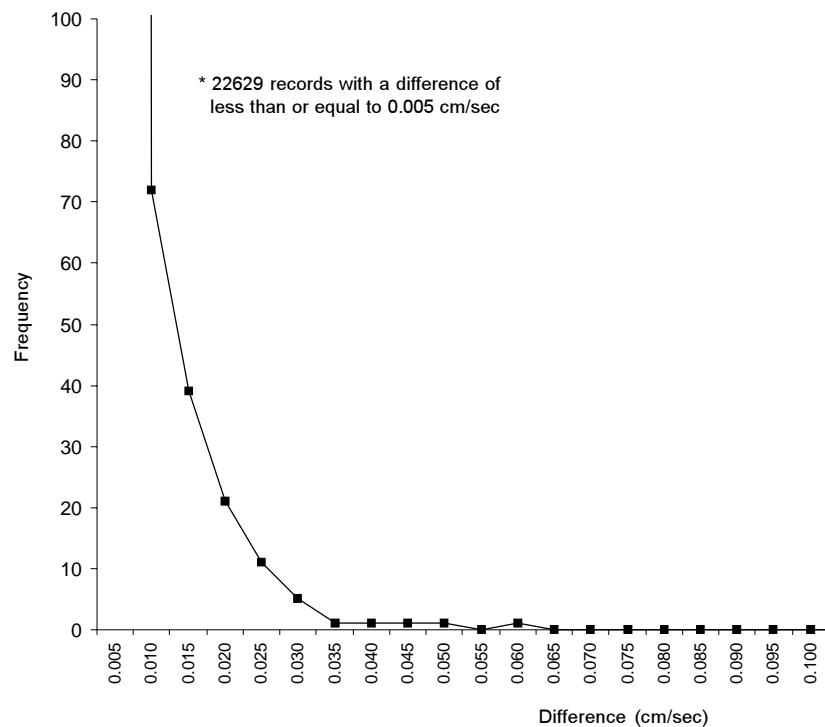


Figure B-4. Histogram of Differences in Weekly Particulate Deposition Velocity Between the Version 2.0 and Version 2.1 MLM Results

